
MSFC Safety *Bulletins*

Eye Injury from Use of Mercury Pen Lamp

What Happened:

Recently, a contractor employee at MSFC received minor burns to the cornea of the eyes, while using a UVP mercury pen lamp for 2 ½ hours aligning a light detection spectrometer. The mercury pen lamp was borrowed from another MSFC facility and used "as is." The lamp showed signs of age; there were no instructions, and there were no warning or caution labels regarding the use of protective eyewear. Also, there was no indication that the lamp should be used with a sheath or slit guard enclosure. The employee had used similar mercury pen lamps in the past; there had never been any obvious need for protective eyewear until this incident. The employee had used no other instrumentation or high-energy light source that day. The suspect lamp is shown in Figures 1 and 2.

Approximately 6 hours after using the lamp, the employee experienced a burning sensation in the eyes. A few hours later, the eye pain had worsened to a severe burning with an intense sensitivity to light; eye vision appeared hazy. The employee was taken to a local hospital emergency room, where numbing drops were put in the eyes. A doctor's examination of the eyes diagnosed the patient with corneal burns (the corneas are the outer lenses of the eyes); the injury is commonly known as "welder's flash burn." The doctor stated the burns would most likely be healed in about two days. The injury was treated by application of antibacterial ointment on the eyes. The eyes were bandaged with compression patches and pain medication was prescribed. The employee was discharged from the ER early Saturday, by Sunday morning the employee's eyes felt normal. At present, ultraviolet light from the UVP mercury lamp is believed to have caused the burns to the eyes.

The manufacturer of the lamp was contacted for information and possible hazard warnings on mercury pen lamps. The manufacturer indicated safety glasses should be worn to protect against pen lamps that produce UV light, especially if the lamps are used for an extended period of time. The manufacturer indicated mercury lamps currently sold today have warning labels. Warning labels are usually on the plastic part of the lamp (near the bulb) or on it's cord. Skin irritation is also possible and the use of gloves is recommended for "extended periods of use." The investigation continues at this time.

Recommended Corrective Action:

Wear safety glasses and gloves while working with Mercury Pen Lamps.

